national or international standards.[20] Considerations of network reliability, however, have economic implications that can influence the cost of providing service. The Commission therefore must not adopt an approach to technical feasibility that provides an economic advantage to the requesting carrier at the expense of overall network reliability.[21]

Likewise explicit uniform national guidelines governing specific performance standards for terms and conditions of interconnection such as maintenance, repair, and installation would be inefficient and inappropriate.[22] Relying on the negotiation process to determine the details of interconnection and, accordingly, dealing with any performance failure, pursuant to the terms of the negotiated agreement, best ad-

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[20] For example, the Commission could build upon the definition of technical feasibility developed by the broad-based Information Industry Liaison Committee for purposes of evaluating unbundling requests by enhanced service providers. See generally A Report of the Information Industry Liaison Committee: Unbundling Criteria (Issue 022), Sept. 12, 1991.

[21] For additional discussion regarding how the Commission should implement the technical feasibility requirement, see generally USTA Comments, CC Docket No. 98-96 (filed May 16, 1996) and Letter from Ameritech to Regina Keeney, Chief, Common Carrier Bureau, of 3/12/96, at 26-28.

[22] See *NPRM* para. 91 (requesting comment on whether performance standard should be adopted).

vances the pro-competitive, deregulatory goals of the 1996 Act.[23]

To the extent the Commission determines that federal criteria are necessary for determining whether interconnection is at least "equal in quality" to that provided by the incumbent LEC to itself or any other party,[24] such criteria should be objective and not overly quantitative or microscopic in detail.[25] Examples of objective interconnection criteria include the same or equivalent interface specifications or transmission parameters provided by the incumbent LEC to itself.

4. Section 251(c)(2) Interconnection Is Expressly Limited To The Transmission And Routing Of Telephone Exchange Service And Exchange Access.

Any national rules for evaluating interconnection arrangements must be limited by the scope of the interconnection duty imposed by section 251(c)(2). As the Commission

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[23] Indeed, in the context of expanded interconnection, the Commission has specifically rejected mandating performance standards. See Expanded Interconnection with Local Telephone Company Facilities, *Report and Order and Notice of Proposed Rulemaking*, 7 FCC Rcd 7369, 7393 n.103 (1992).

[24] See *NPRM* para. 63.

[25] See MTS/WATS Market Structure (Phase III), 100 F.C.C.2d 860, 877 (1985) (recognizing, in the context of implementing equal access provisions of the MFJ, that an overly quantitative or detailed definition of "equal in quality" would be impractical)

notes, section 251(c)(2) expressly provides that the interconnection obtained by the requesting carrier must be for the purpose of offering both "telephone exchange service and exchange access."[26] Thus, the requesting carrier may not obtain interconnection pursuant to section 251(c)(2) if such carrier intends to offer *solely* exchange access, such as certain competitive providers ("CAPS") do today.

This interpretation of the scope of section 251(c)(2) is confirmed by legislative history. The Conference agreement adopted a "new model" for interconnection that incorporates provisions from both the House and Senate bills.[27] The Senate provision regarding interconnection more closely resembles the section 251(c)(2) interconnection duty ultimately adopted. The Senate bill, however, provided that LECs determined to have market power have the duty to provide "interconnection . . . for the purpose of permitting the [requesting] telecommunications carrier to provide telephone exchange or exchange access service."[28] An affirmative deci-

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[26] See *NPRM* para. 162 (emphasis added).

[27] See H.R. Rep. No. 458, 104th Cong., 2d Sess. 121 (1996), reprinted in 1996 U.S.C.C.A.N. (104 Stat.) 124, 132 [hereinafter *Conference Report*].

[28] S. 652, 104th Cong., 1st Sess. new § 251(a)(1)(A)(1995) (emphasis added).

sion thus was made at Conference to change the conjunction connecting the terms telephone exchange service and exchange access from "or" to "and." This change represents a decision by Congress that interconnection pursuant to section 251(c)(2) be available to new entrants seeking to compete fully with incumbent LECs by providing both competing telephone exchange service and exchange access.

This requirement is also most consistent with the fundamental purpose of the 1996 Act. The overriding purpose of section 251 of the 1996 Act is to eliminate barriers to local exchange competition. Congress must have recognized that competitive providers of local exchange service would necessarily provide exchange access service on behalf of their local exchange customers because Congress required that they be offered interconnection for the provision of local exchange and exchange access service. Nothing in the 1996 Act or its legislative history, however, indicates that Congress was concerned about exchange access service per se. Indeed, the Commission, through its expanded interconnection rules, already had required interconnection for the provision of ex-

change access services.[29] Thus, there was no need for Congress to act in this area.

As the Commission recognizes, ignoring the conjunction "and" and requiring incumbent LECs to offer section 251(c) interconnection to providers of access, but not local exchange services, would make it quite easy for interexchange carriers ("IXCs") to end-run the Commission's access charge regime.[30] They could simply establish an affiliate competitive access provider ("CAP") and use that affiliate to purchase access under the terms established for interconnection. This end-run is a result Congress neither intended nor contemplated. Rather, Congress intended that section 251(c) interconnection be offered to carriers providing competitive local exchange service in recognition that such carriers would necessarily also be providing exchange access service.[31]

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[29] See generally Expanded Interconnection With Local Telephone Company Facilities, CC Docket No. 91-141; 47 C.F.R. pt. 64, subp. N.

[30] See *NPRM* para. 162.

[31] The Commission suggests that requiring cost-based interconnection only for carriers offering both telephone exchange and exchange access could "exclude" CAPs that currently interconnect with incumbent LECs in order to offer competing exchange access transport services. See *NPRM* para. 162. On the contrary, CAPs will still be able to interconnect pursuant to the Commission's expanded interconnection rules. To the extent that a CAP interconnects in order to provide

(continued...)

Similarly, the regulatory paradigm for obtaining access for purposes of originating and terminating toll traffic remains unaffected by section 251. As the Commission correctly concludes, section 251 does not displace the existing access charge regime.[32] That is, IXCs may not obtain interconnection pursuant to section 251(c)(2) merely for the origination and termination of interexchange traffic. To interpret the 1996 Act otherwise conflicts with the plain language of section 251(i), which ratifies and leaves unaffected the Commission's jurisdiction over interstate services, including access charges. Moreover, such an interpretation would transfer regulation of interstate charges from the Commission to the states because section 252 provides that pricing determinations will be made by the relevant state commission. Congress clearly did not intend such a result because it would be directly contradictory to the Commission's authority under section 201.[33] Although section 251(g) recognizes that the

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[31] (...continued)
local exchange service, that interconnection would be governed by section 251(c).

[32] See *NPRM* paras. 146, 160-61.

[33] Significantly, MCI has made the same legal argument in urging the Commission to allow states to enforce the geographic averaging requirements for intrastate, interexchange service: "[h]ad Congress intended for the Commission to
(continued...)

Commission has discretion to review its access rules, the 1996 Act does not require such review as part of the rulemaking to implement section 251.

B. Collocation

1. The Term "Premises" Should Include Only Central Offices Housing Network Facilities In Which The Incumbent LEC Has The Exclusive Right of Occupancy.

Ameritech concurs with USTA in supporting the Commission's proposal to promulgate federal collocation standards by re-adopting prior physical collocation standards established in the context of expanded interconnection.[34] For purposes of physical collocation, the Commission should clarify that the term "premises" is limited to central office buildings (or portions thereof) in which the incumbent LEC has the exclusive right of occupancy, and in which are located LEC network equipment and the technically feasible point of interconnection or access to network elements.[35]

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[33] (...continued)
regulate intrastate interexchange rates, it would have more substantially amended the Communications Act, ..." Comments of MCI Telecommunications Corporation, CC Docket No. 96-61 (filed Apr. 19, 1996) at 28-29.

[34] See *NPRM* paras. 67 & 73.

[35] See id. para. 71 (requesting comment on how the term "premises" should be defined). See Expanded Interconnection with Local Telephone Company Facilities, 7 FCC Rcd at 7417-
(continued...)

The Commission should not find that section 251(c)(6) requires physical collocation in structures, such as vaults or huts, located on a private easement or public rights-of-way because there are legal and contractual restrictions on the placement of equipment belonging to third parties at most of such locations.[36] As a legal matter, a LEC may not be able to give another carrier authorization to place equipment on a third party's property. Moreover, as the Commission concluded previously, collocation at these remote locations raises a number of operational, administrative, and security concerns.[37] Finally, Congress has specifically addressed the issue of a requesting carrier's access to poles, ducts, conduits, and rights-of-way in sections 251(b)(4) and 224.

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[35](...continued)
18 (limiting collocation to serving wire centers and end offices).

[36] See *NPRM* para. 41 (requesting comment on whether structures on public rights-of-way should be deemed LEC premises).

[37] See Expanded Interconnection with Local Telephone Company Facilities, 7 FCC Rcd at 7418.

2. Mandating Virtual Collocation In Addition To, Rather Than As An Exception To, Physical Collocation, Would Contravene The Plain Language Of Section 251(c)(6).

Contrary to the Commission's apparent conclusion,[38] the 1996 Act does not grant the Commission the authority to mandate virtual collocation in addition to statutorily required physical collocation. Section 251(c)(6) specifically provides that virtual collocation is an exception that applies *only* if the incumbent LEC demonstrates that physical collocation is not practical for technical reasons or space limitations. It is a well-established principle of statutory interpretation that specific legislative provisions take precedence over general provisions.[39] Because Congress has specifically addressed collocation in section 251(c)(6), it would be inappropriate for the Commission to mandate virtual collocation pursuant to the section 251(c)(2) general duty to provide interconnection at technically feasible points when the more specific language contemplates virtual collocation only when physical collocation is not practical. This interpretation is also consistent with the Commission's original determination

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[38] See *NPRM* para. 44.

[39] See, e.g., Traynor v. Turnage, 485 U.S. 535, 539 (1988); Galliano v. U.S. Postal Serv., 836 F.2d 1362, 1367 (D.C. Cir. 1988); United States v. Paddack, 825 F.2d 504, 514 (D.C. Cir. 1987).

to require virtual collocation only where physical collocation is unavailable.

C. Access To Network Elements

1. Section 251(c)(3) Should Be Construed Consistently With Its Purpose To Promote Facilities-Based Competition.

The Commission's analysis in its *NPRM* recognizes, and the legislative history confirms, that the primary purpose of the 1996 Act's unbundling provisions is to promote local exchange competition by giving new entrants a middle option between pure facilities-based service and pure resale.[40]

This construction is consistent with the goals of pro-competitive states that have already required unbundling. For example, the Illinois Commerce Commission has stated:

> As Staff and others observed, unbundling can facilitate competitive entry by reducing the capital investment necessary to provide local exchange service.
>
> The full pro-competitive benefits of reducing the capital cost barriers to entry can be achieved only *if the incumbent LECs are required to sell their competitors only those network components and functionalities that*

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[40] Indeed, the legislative history of section 251(c)(3), quoted in the *NPRM*, confirms this intent: "[I]t is unlikely that competitors will have a fully redundant network in place when they initially offer local service because the investment necessary is so significant. Some facilities and capabilities will likely need to be obtained from the incumbent [LEC] as network elements pursuant to new section 251." *Conference Report* at 148, quoted in *NPRM* at n.103.

> *new LECs need.* . . . Unbundling not only reduces competitors' costs of entering the local exchange market, it can reduce the overall societal cost of providing telecommunications services by enabling new entrants to avoid wasteful duplication of incumbent LEC facilities for which competitive provisioning may not be economically viable.[41]

Similarly, the Michigan Public Service Commission has noted that competition is increased by enabling "a new entrant . . . to rely on a combination of its own facilities and facilities leased from the incumbent LEC."[42]

In short, the unbundling provisions of the 1996 Act were not established in a vacuum. They have a history and a widely recognized purpose: bridging the gap between pure facilities competition and pure resale by making it possible for competitive LECs to combine their own facilities with incumbent LEC facilities in providing local exchange and exchange access service. The unbundling provisions were neither intended to provide IXCs with a vehicle to end-run the Commission's interstate access charge regime, nor to establish

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41 Customer First Order at 47.

42 City Signal at 12.

a duplicative and potentially harmful set of rules for what is, in reality, nothing more than pure resale.[43]

Construing section 251(c)(3) to permit a classic arbitrage opportunity would be inefficient and would discourage the development of facilities-based competition. Carriers would purchase services and elements under either section 251(c)(3) or (c)(4) depending upon which pricing standard resulted in the lower price to the requesting carriers. For example, carriers would be able to purchase those retail services priced below cost under the resale provisions of the 1996 Act, while procuring other services at cost by bundling all of the components of such services pursuant to section 251(c)(3). With such "favorable," but grossly irrational, "resale" opportunities, carriers would have little incentive to build their own networks. Moreover, this kind of arbitrage situation could lead to inefficient entry and a lack of fair return to the incumbent LEC providing the network elements or resold service. Such "competition" does not benefit consumers. Congress did not intend that section 251(c)(3) would

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[43] Of course, if the national pricing standard for access to network elements ultimately adopted properly permits incumbent LECs to recover all costs and a reasonable profit as required by section 252(d)(1), the opportunity for arbitrage and the disincentives to facilities-based competition and technical innovation will be substantially lessened.

entirely undercut resale pursuant to section 251(c)(4), but rather that section 251(c)(3) would ensure that incumbent LECs provide network elements (at wholesale) that were not previously made available individually at retail on a wholesale basis.

Moreover, Congress in section 251(d)(2) has provided the Commission with direct guidance to avoid undercutting the section 251(c)(4) resale provision. Specifically, in determining what network elements must be made available, the FCC must consider whether "failure to provide access . . . would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[44] If the incumbent LEC is providing the equivalent telecommunications service at retail, and accordingly making it available for resale at wholesale rates, the requesting carrier's lack of access to re-bundled network elements to re-create exactly the same service offering clearly does not impair that carrier's ability to offer that service. Section 251(c)(3), which is expressly limited by Subsection (d)(2), simply does not permit requesting carriers to piece together network elements, all purchased from the incumbent LEC, in order to

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[44] 47 U.S.C. § 251(d)(2)(B).

offer a service equivalent to one that the incumbent LEC already offers at retail.

Additionally, as noted by the Commission,[45] an interpretation of section 252(c)(3) that allows requesting carriers to re-bundle all network elements comprising a retail service -- without combining such network elements with their own elements -- would allow IXCs to circumvent the section 271(e)(1) joint marketing limitation.[46] This joint marketing restriction reflects two important goals. First, it encourages IXCs to build their own local exchange facilities by offering them the incentive of earlier joint marketing authority. Second, it promotes fair competition. IXCs have acknowledged to this Commission that "a large portion of the market prefers to obtain all voice services as a package."[47] They also have

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45 See *NPRM* at n.113.

46 Section 271(e)(1) prohibits IXCs with more than five percent of presubscribed access lines in the U.S. from jointly marketing long distance services and resold telephone exchange service obtained from a BOC until the earlier of February 8, 1999 or the date on which the BOC is authorized to provide in-region interLATA services within a particular state. 47 U.S.C. § 271(e)(1).

47 AT&T, MCI, LDDS WorldCom, & CompTel, Interconnection, Unbundling and Access: Creating Full Service Competition Under the Telecommunications Act of 1996, at 1-2 (Mar. 1996).

acknowledged that those who can first offer one-stop shopping gain a significant market advantage. As AT&T has stated:

> [O]ur research shows that . . . about two out of three people will want to bundle long distance and local services. . . . Customers have always liked bundles. In fact, they've never really distinguished between local and long distance services. It's not a logical separation in their minds. It's only logical to regulators. . . . Our job is to develop the bundles of service they most want. And we'll do it by bringing the power of our brand to bundles. The right bundles strengthen the bonds with customers and increase retention rates. And, as new combinations of communications bundles become possible, the first company to satisfy people's needs for those bundles gains a great advantage. They establish a bond that even the promise of lower prices won't break.[48]

The Commission should not skew competition in the marketplace by allowing IXCs to circumvent the joint marketing provisions of the 1996 Act. Resale by any other name is still resale, and the Commission should treat it as such. Therefore, if a carrier purchases all of the elements necessary to re-create a service offered by the incumbent LEC at retail, that purchase should be treated as a purchase under section 251(c)(4) of the 1996 Act, not 251(c)(3).

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[48] Joseph P. Nacchio, Executive Vice President, AT&T Consumer and Small Business Division, Keeping the Customers Satisfied, Remarks at Morgan Stanley Conference (Feb. 13, 1996) (emphasis added).

2. In Defining The Core Set Of Network Elements, The Commission Must Follow The Statutorily Prescribed Analysis For Determining What Elements Must Be Made Available Pursuant To Sections 251(c)(3) And 251(d)(2).

Section 251(c)(3) provides that an incumbent LEC must provide, upon request, nondiscriminatory access to network elements on an unbundled basis to any telecommunications carrier for the provision of telecommunications service. As the Commission correctly concludes, section 251(d)(2) obligates the Commission to determine what network elements should be made available under section 251(c)(3).[49] The Commission, however, should not attempt to itemize an exhaustive list of network elements. Rather, the Commission should define a core set of network elements -- that are technically feasible and needed to provide competitive services -- which all incumbent LECs must make available upon request. Additional network elements beyond that core should evolve through negotiations.

As explained in greater detail below, Ameritech proposes that the Commission undertake the following analysis when developing the core set of network elements: (i) Does the proposed element fit within the statutory definition of "network element"? (ii) If so, does it meet the section 251(d)(2) criteria? and (iii) Is access to the proposed ele-

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[49] See *NPRM* para. 7.

ment technically feasible? This analytical framework successfully balances the Commission's interest in providing adequate guidance for the states with the statutory goal of relying on negotiations between the carriers. Moreover, this interpretation harmonizes sections 251(c)(3), 251(d)(2), 252, and 271(c)(2)(B) and thus is consistent with the "whole statute" principle of statutory interpretation.[50]

Two conditions must be met for a requested element to qualify as a network element. First, the prospective network element must be equipment or a facility, including features, functions and capabilities that arise from such equipment or facility, that the incumbent LEC uses to provide a telecommunications service. Second, the network element need be provided only to the extent that it is "sufficient" for billing and collection or "used" by the requesting carrier to transmit, route or otherwise provide a telecommunications service.[51] Any federal regulations establishing a core set of network elements must reflect these principles and limitations.

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50 The "whole statute" principle provides that each part or section of a statute should be construed with every other part or section so as to produce a harmonious whole. See, e.g., Gustafson v. Alloyd Co., Inc., 115 S. Ct. 1061 (1995); Smith v. U.S., 508 U.S. 223 (1993).

51 47 U.S.C. § 153(29).

Under the second prong of analysis, the Commission must consider whether failure to provide access to the element would "impair the ability of the [requesting] telecommunications carrier . . . to provide the services that it seeks to offer"[52] or, in the case of proprietary network elements,[53] whether access is necessary."[54] Parties such as AT&T that argue that section 251(d)(2) requires the Commission to mandate an extensive list of network elements are mistaken. Rather, this is a limiting provision. In it, Congress placed reasonable bounds on the requirement to provide unbundled network elements. Specifically, Congress expressly authorized by the Commissioner to limit access to network elements on an unbundled basis including instances where failure to obtain access would materially diminish the quality of a competing service or, in the case of proprietary elements, would render

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[52] 47 U.S.C. § 251(d)(2)(B). As the Commission has correctly concluded, the section 251(d)(2)(B) prerequisite applies to all network elements, not just those that are proprietary in nature. See *NPRM* para. 93.

[53] Network elements that are proprietary in nature must be maintained in confidence by the telecommunications carrier to whom access is provided. The Commission therefore should clarify that the provision of statutorily required access to proprietary elements in no way waives the proprietary nature of such elements.

[54] 47 U.S.C. § 251(d)(2)(A).

the requesting carrier incapable of providing a competing service.

Finally, under the third prong, the Commission must examine the technical feasibility of providing access to the proposed element. As discussed earlier, the Commission should provide guidance on the criteria for determining technical feasibility.[55] Ameritech agrees that such guidelines can create a rebuttable presumption regarding the technical feasibility of (i) network elements currently being provided on an unbundled basis by incumbent LECs and being used by one or more telecommunications carriers in the provision of a telecommunications service and (ii) specific network elements required to be provided, or generally offered, on an unbundled basis pursuant to the competitive checklist.[56] This approach ensures that network elements that are not actually needed or that are not technically feasible are not prematurely included as "national requirements."

3. The Core Set of Network Elements Should Be Those Elements Actually Provided Today Or Specified In The Competitive Checklist.

Ameritech agrees that the four categories of network elements listed in paragraph 93 of the *NPRM* (loops, switches,

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[55] See supra Part II.A.

[56] See 47 U.S.C. § 271(c)(2)(B)(iv), (v), (vi), and (x).

transport facilities, and signalling and databases) pass the analysis described above and should constitute the core set of network elements. Experience has demonstrated that it is technically feasible for LECs to provide these elements on an unbundled basis. In addition, it is clear that these elements pass the "impairment test" of section 251(d)(2). Indeed, the fact that Congress has included these elements in the section 271 checklist is compelling evidence of the importance of these elements to interconnectors. All incumbent LECs, therefore, should be required to offer these elements to requesting interconnectors.

Access to network elements beyond these general categories should evolve through negotiations between carriers pursuant to good faith requests. Moreover, procedure for handling good faith requests would expedite processing of the request and protect both parties to the negotiations by providing a means for efficient resolution of open issues. Such a procedure should require the requested party to provide reasonable responses to requests. In turn, a good faith request should include a commitment by the requesting carrier either to order the network elements or interconnection in the quantity requested or to reimburse the incumbent LEC for the costs incurred in responding to such request. If structured proper-

ly, a good faith request process will protect and serve the interests of both parties to the regulation, as well as providing evidence necessary for arbitrators and state regulators to resolve disputes.[57]

a. Local Loop Transmission Should Be Provided, Upon Request, But Subloop Unbundling Should Evolve Through Good Faith Negotiations.

For over a year, Ameritech has offered unbundled local loop transmission service in Illinois and Michigan by providing local loop transmission from the main distributing frame in Ameritech's end office to the network interface at the customer's premises, separate from any other service or feature. In fact, it is estimated that over 45,000 Ameritech loops will be used by interconnecting carriers by the end of 1996 with a projected ongoing growth rate exceeding 100% per year.[58] In addition, item (iv) of the competitive checklist requires that BOCs provide "local loop transmission from the central office to the customers' premises, unbundled from

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[57] See generally discussion of bona fide request process in USTA comments, CC Docket No. 96-98 (filed May 16, 1996); Letter from Ameritech to Regina Keeney, Chief, Common Carrier Bureau, of 3/12/96, at 29-32.

[58] See Bellcore, Issues Concerning the Providing of Unbundled Subloop Elements by Ameritech (May 15, 1996) (attached hereto) [hereinafter "Bellcore Statement"].

local switching and other services."[59] Ameritech's offering thus demonstrates the technical feasibility of providing unbundled local loop transmission. Inclusion of local loop transmission in the competitive checklist unquestionably demonstrates Congress's intent that local loop transmission satisfies the section 251(d)(2) prerequisite. The Commission should therefore include this service in the core list of network elements.

Ameritech, however, believes that the tentative conclusion regarding AT&T's subloop unbundling proposals is premature.[60] Subloop unbundling fails the analytical test discussed above. As the Joint Conference Report notes, the local loop is a network element.[61] Even assuming arguendo that sub-elements of an element could fit within the statutory definition of network element, the proponents of subloop unbundling -- primarily AT&T -- have not demonstrated that failure to obtain access to the subloop would impair their ability to provide telecommunications services as required by section 251(d)(2).

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[59] 47 U.S.C. § 271(c)(2)(B)(iv).

[60] See *NPRM* para. 97 (tentatively concluding that further unbundling of the local loop should be required).

[61] See *Conference Report* at 116.

No one has not demonstrated the technical feasibility of providing access to loop feeder and distribution plants on an unbundled basis at remote switching or concentration sites on a generalized basis. Similarly, because subloop unbundling has been neither required by Congress in the section 271 competitive checklist nor implemented by any incumbent LEC, it simply cannot presumed to be technically feasible. It also should be clarified that neither Illinois nor Hawaii has unconditionally mandated subloop unbundling.[62] In fact, as set forth in the attached summary prepared by Bellcore, subloop unbundling is technically impossible for 27%

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[62] See id. The Illinois Commerce Commission has approved subloop unbundling, but only in response to bona fide requests that are found to be technically feasible. Specifically, the ICC requires that LECs file intrastate tariffs offering "loop sub-elements" within 180 days of receiving a bona fide request for such sub-elements. A bona fide request is defined as a written request by an interconnector which states that it will purchase specific loop sub-elements within six months of the date of the request. Ill. Admin. Code tit. 83, § 790.320. To date in Illinois no entity has requested subloop unbundling. Moreover, LECs may petition for waiver within 60 days of receiving a bona fide request if the requested interconnection is not technically or economically practicable, considering demand for the service, or is otherwise contrary to the public interest. See Adoption of Rules on Line-side Interconnection and Reciprocal Interconnection, Interim Order No. 94-0049 (Ill. Commerce Comm'n Apr. 7, 1995). The Hawaii Public Utility Commission has merely requested that GTE submit cost information on feeder, distribution, and concentrator points of interconnection within the local loop. Hawaii has not ordered GTE to provide subloop unbundling. See Order No. 14129 (Haw. Pub. Util. Comm'n Aug. 14, 1995).

of Ameritech's loops that are directly connected via undivided copper cables. Moreover, given the current complex plant design, planning, network architecture, operational and operations support issues, there are serious hurdles to overcome in order to offer loop sub-element unbundling at all.[63]

While words have been developed which generically describe how to piece-part loop facilities (*e.g.*, feeder and local distribution), these arrangements have not been developed into network elements. For example, Ameritech has not received from potential interconnecting carriers a technical description of the locations, equipment interfaces, and other details of the subloop network elements they may seek. These technical details are essential for determining if and how subloop unbundling can be provided. In addition, standards and interfaces applicable to any of these subloop arrangements have yet to be defined.[64]

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[63] See Bellcore Statement.

[64] Standards have been published and are available to describe unbundled local loops. See Ameritech's Technical Publication TR-TMO-000 22 and TR-TMO-000123. Other providers of unbundled local loops have published similar specifications. No similar specification exists today for loop sub-elements.

Moreover, it has not even been determined what type of subloop arrangements may be technically feasible to unbundle.[65] Such arrangements cannot be accomplished by reprogramming software or even a switch. Implementation is required in the field at the thousands of potential points of access to subloop elements. For example, in Illinois alone access to loop transmission at Ameritech end offices would create around 300 possible points of access. If even the most basic form of subloop unbundling were implemented at above-ground cabinets and controlled environment vaults, over 24,000 additional possible points would have to be created in the field throughout Illinois.[66] If further unbundling were required at pedestals and poles, the number of potential points

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[65] There are a number of technical and administrative questions which have to be addressed. For instance, the local loop multiplexing equipment employed by Ameritech does not contain cross-connect capabilities. Each channel unit is "hard wired" to underground cable leaving the multiplexer's location. The multiplexer through its connections to the wire center also provides basic testing capabilities essential for trouble sectionalization and repair. Unlike central offices which provide some flexibility in equipment selection, layout, and deployment, controlled environment vaults ("CEVs") and above-ground cabinets are designed and pre-installation equipped to support only a specified quantity and equipment vintage of a given manufacturer. The thermal, electrical, and emergency power requirements of each installation is predetermined and balanced against the type of equipment installed.

[66] Bellcore Statement at 2.